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SHL040

AMENDMENTS TO THE CLAIMS:

1. (Previously presented) An optical module comprising:  
an elongated optical waveguide having multiple cores buried in a clad;  
a rectangular-shaped silicon optical waveguide substrate, on which said optical waveguide is mounted, and along each side edge of an upper surface of which a high precision step is formed extending in a longitudinal direction of the waveguide substrate; and  
an optical fiber connecting end member having a hole therethrough for accommodating and fixing an end surface of the optical waveguide substrate, the hole having a top surface, a bottom surface, a first side surface, and a second side surface, wherein:  
a step is formed on the top surface of the hole, along each side surface of the hole, so as to fit the high precision steps on the waveguide substrate when the waveguide substrate is inserted in the hole, and  
said end member has a cavity that opens from the bottom surface of the hole to the bottom of said end member, permitting said substrate to be pressed toward the top surface of the hole so as to align the high precision steps on said substrate with the steps of the hole.
2. (Previously presented) An optical module according to claim 1, further comprising an optical element mounted on and connected to said optical waveguide.
3. (Previously presented) An optical module according to claim 1 wherein:  
an inclined groove, that inclines relative to the longitudinal direction of the optical waveguide, is formed on said optical waveguide, and

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said optical module further comprises a light reflecting device positioned in the inclined groove, to reflect light propagated along said optical waveguide to the outside of said optical waveguide.

4. (Previously presented) An optical module according to claim 1 wherein an inclined groove, that inclines relative to the longitudinal direction of the optical waveguide, is formed on said optical waveguide, and

said optical module further comprises an optical wavelength selecting device positioned in the inclined groove, to select light having a wavelength in a desired range from the light propagated through said optical waveguide and extracts the selected light to the outside of said optical waveguide.

5-6. (Cancelled)

7. (Currently amended) An optical element housing member comprising a body member having a longitudinally extending hole therethrough for accommodating an end of a substrate and optically connecting the substrate to an optical element, wherein:

the hole has a top surface, a bottom surface, a first side surface, and a second side surface, and

a step for positioning the substrate is formed on the top surface of the hole, along each longitudinally extending side surface of the hole, and

said body member includes a cavity that opens from the bottom surface of the hole to

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the bottom of said body member, permitting the substrate to be pressed toward the top surface  
of the hole so as to align steps on the substrate with the steps of the hole.

8-12. (Cancelled)

13. (Previously presented) An optical module according to claim 1, further comprising an optical element mounted on said waveguide substrate and optically connected to said optical waveguide.

14. (Previously presented) An optical module according to claim 1, wherein said end member has guide pin insertion holes extending into one end thereof, for insertion of guide pins.

15. (Canceled)

16. (Previously presented) An optical module according to claim 1, wherein said substrate is affixed to said end member with an epoxy glue.

17. (Previously presented) An optical element housing member according to claim 7, wherein said body member includes guide pin insertion holes extending into one end thereof, for insertion of guide pins.

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18. (Canceled)